REMARKS/ARGUMENTS

Request for Continued Examination:

The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

Amendments to the Claims

Claims 1, 5, 7, 8, 12, 14, 15, 17, 21, and 22 have been amended to more clearly define the limitation directed to calibrating the tilt angle to an optimal tilt angle, which is fully supported by the specification of applicant's disclosure. As no new matter is introduced, consideration of above claim amendments is respectfully requested.

Claim Rejections – 35 USC 103

Claims 1, 3, 8-10 and 15-22 are rejected under 35 U.S.C. 103(a) as being obvious over Fukumoto et al. (US 6493296) in view of Ma et al. (US 6801486).

Response:

Claim 1

In the rejection of claim 1, Examiner stated: "the lowest amplitude of the monitoring signal occurs when the radial tilt is at a minimum **and** the detrack is at a minimum. When the detrack is at the minimum this corresponds to an on track state which would be the lowest amplitude DPD signal. Therefore, the lowest amplitude DPD signal corresponds to the lowest amplitude monitoring signal" (page 5, paragraph 2 of the Office action dated 03/28/2008). The applicant respectfully disagrees, and points out that the teachings of Ma et al. are mistakenly considered by Examiner. More specifically, the applicant cannot find evidence derived from teachings of Ma et al. to support such a statement made by Examiner. In col. 5, lines 34-43, Ma et al. expressly teaches that an initial offset of a detection signal with respect to the radial tilt, tangential tilt, defocus, or detrack can be eliminated using a monitoring signal; in addition, Ma et al. further expressly states: "By eliminating the offset of the radial tilt detection signal, the

optical recording/reproduction system is adjusted to an optimal state with respect to the radial tilt. The optical recording/reproducing system can be adjusted to an optimal state with respect to a tangential tilt, defocus, and detrack in the same manner (col. 5, lines 53-58)".

The applicant would like to point out **Ma et al. fails to teach or suggest that the initial offsets of the detection signals with respect to the radial tilt and the detrack are dependent upon each other**. As is evident from the characteristic curves illustrated in Ma et al. FIG. 3A and FIG. 3D, the radial tilt angle is dependent upon the monitoring signal value, and the detrack is also dependent upon the monitoring signal value. In addition, the radial tilt angle and the detrack are both proportional to the value of the monitoring signal. However, Ma et al. fails to teach or suggest that the lowest value of the monitoring signal occurs when the radial tilt is at a minimum **and** the detrack is at a minimum. In other word, with respect to a lowest value of the monitoring signal corresponding to the minimum radial tilt, the applicant cannot find evidence from teachings of Ma et al. to show that the detrack is also at the minimum. This implies that an initial offset of a detection signal with respect to the radial tilt and an initial offset of a detection signal with respect to the detrack are **independently and individually** eliminated using monitoring signals obtained during different time intervals. In other words, as evidenced by Ma et al. FIG. 3A and FIG. 3D, when the monitoring signal is at a minimum during the process of adjusting an initial state of the optical recording/reproducing system with respect to the radial tilt, the radial tilt is zero, but the detrack is **not** zero under the same monitoring signal value. Therefore, even though Ma et al. does disclose a DPD signal, i.e., a tracking error signal (col. 5, lines 1-3), Ma's disclosure, however, fails to teach or suggest that the lowest amplitude of the monitoring signal occurs when the radial tilt is at a minimum **and** the detrack corresponding to tracking error is also at a minimum, expressly or inherently. Examiner's statement "the lowest amplitude DPD signal corresponds to the lowest amplitude monitoring signal (page 5, paragraph 2 of the Office action dated 03/28/2008)" is clearly not based on evidence from the cited prior art.

Furthermore, in the Office action dated 03/28/2008, Examiner also stated: "Ma et al. teaches controlling the tilt to the angle having the lowest amplitude DPD signal (fig. 3A and column 6 lines 50-55…)". The applicant would like to point out that FIG. 3A of Ma's disclosure fails to show the relationship between the radial tile and the **amplitude** of the monitoring signal. In view of applicant's Fig. 3, the applicant asserts that the ordinate axis in Ma et al. FIG. 3A does not represent the monitoring signal amplitude. More specifically, Ma et al. merely teaches that FIGS. 3A through 3D are graphs of changes in a monitoring signal according to a radial tilt, tangential tilt, defocus and detrack, respectively (col. 5, lines 11-16); however, Ma et al. fails to teach or suggest, explicitly or implicitly, that the changes shown in FIG. 3A through FIG. 3D are representative of the monitoring signal amplitude changes. Upon thorough review of Ma's disclosure, the applicant finds **no evidence showing that the monitoring signal amplitude has a lowest value when the tilt is at a minimum**. Therefore, this also shows that Examiner's statement "the lowest amplitude DPD signal corresponds to the lowest **amplitude** monitoring signal (page 5, paragraph 2 of the Office action dated 03/28/2008)" is clearly not based on evidence from the cited art.

In summary, the applicant respectfully asserts that the teachings of Ma et al. are mistakenly considered by Examiner, and the claimed limitation "the tilt search block controls the tilt angle to an optimal tilt angle, wherein the optimal angle associates with a lowest amplitude DPD signal" is neither taught nor suggested by the combined teachings of Ma et al. (*emphasis added*) Therefore, claim 1 should be found allowable over the combined teaching of the cited references.

Claim 3

Claim 3 is dependent upon claim 1, and should be allowed if claim 1 is found allowable.

Claim 8

Claim 8 is drawn to a method of using the corresponding apparatus claimed in claim 1. In view of above arguments of claim 1, the applicant asserts that the

claimed limitation "controlling the tilt angle to an optimal tilt angle, wherein the optimal tilt angle associates with a lowest amplitude DPD signal" is by no means taught or suggested by teachings of Ma et al. (*emphasis added*) Therefore, claim 8 should be found allowable over the combined teaching of the cited references.

Claims 9, 10, and 15-18

Claims 9, 10, and 15-18 are dependent upon claim 8, and should be allowed if claim 8 is found allowable.

Claim 19

In the Office action dated 03/28/2008, claim 19 was rejected due to the same reasons applied to claim 1. In view of above arguments of claim 1, the applicant points out that Examiner's statement "the lowest amplitude DPD signal corresponds to the lowest amplitude monitoring signal (page 5, paragraph 2 of the Office action dated 03/28/2008)" is clearly not based on evidence from the cited art. In addition, the applicant further points out that neither Fukumoto nor Ma et al. teaches adjusting the tilt angle using the DPD signal only.

In view of at least above reasons, the applicant therefore asserts that the claimed limitation "the tilt search block controls the tilt servo to adjust the tilt angle between the optical disc and the object lens according to only the DPD signal" is neither taught nor suggested by the combined teaching of the cited references, and claim 19 should be found allowable. (*emphasis added*)

Claim 20

Claim 20 is drawn to a method of using the corresponding apparatus claimed in claim 19. In view of above arguments of claim 19, the applicant asserts that the claimed limitation "controlling the tilt servo to adjust the tilt angle between the optical disc and the object lens according to only the DPD signal " is neither taught nor suggested by the combined teaching of the cited references, and claim 19 should be found allowable. (*emphasis added*)

Claim 21

In the Office action dated 03/28/2008, claim 21 was rejected due to the same reasons applied to claim 1. In view of above arguments of claim 1, the applicant points out that Examiner's statement "the lowest amplitude DPD signal corresponds to the lowest amplitude monitoring signal (page 5, paragraph 2 of the Office action dated 03/28/2008)" is clearly not based on evidence from the cited art. In addition, the applicant further points out that neither Fukumoto nor Ma et al. teaches adjusting the tilt angle to a plurality of angles and then controlling the tilt angle to a specific angle selected from the plurality of angles according to the DPD signal.

In view of at least above reasons, the applicant therefore asserts that the claimed limitation "controls the tilt angle to a specific tilt angle selected from the plurality of angles according to the DPD signal" is neither taught nor suggested by the combined teaching of the cited references, and claim 21 should be found allowable. (*emphasis added*)

Claim 22

Claim 22 is drawn to a method of using the corresponding apparatus claimed in claim 21. In view of above arguments of claim 21, the applicant therefore asserts that the claimed limitation "controlling the tilt angle to a specific tilt angle selected from the plurality of angles according to the DPD signal" is neither taught nor suggested by the combined teaching of the cited references, and claim 22 should be found allowable. (*emphasis added*)

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumoto et al. and Ma et al. in view of Scheffler (US 5021893).

Response:

Claim 2 is dependent upon claim 1, and should be allowed if claim 1 is found allowable.

Claims 5-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Fukumoto et al. and Ma et al. in view of Gleim (US 4888754).

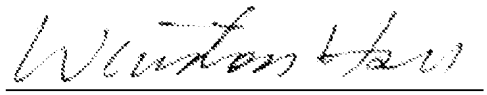
Response:

Claims 5-7 are dependent upon claim 1, and should be allowed if claim 1 is found allowable. Similarly, claims 12-14 are dependent upon claim 8, and should be allowed if claim 8 is found allowable.

Conclusion

Based on the above remarks/arguments, the applicant respectfully submits that all of the rejections set forth in the Office Action dated March 28, 2008 have been overcome and the pending claims are now in condition for allowance. The applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case. If a telephone conference would facilitate the prosecution of this application, the Examiner is invited to contact the undersigned applicant's representative at the number indicated below.

Sincerely yours,



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